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F. L. CLEMENT
Director

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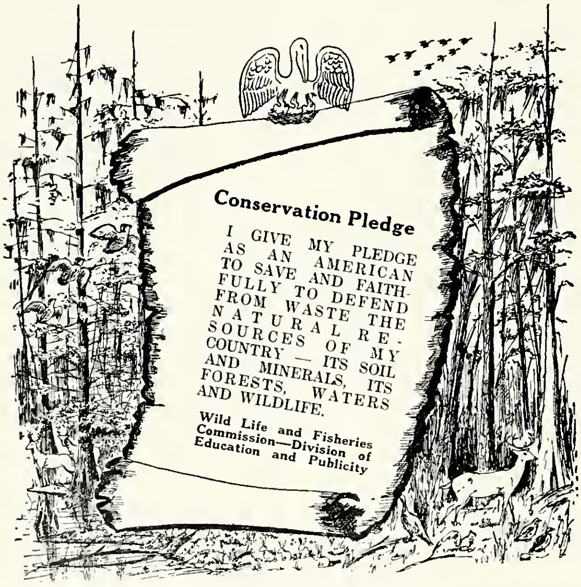

Conservation Pledge
I GIVE MY PLEDGE AS AN AMERICAN TO SAVE AND FAITHFULLY TO DEFEND FROM WASTE THE NATURAL RESOURCES OF MY COUNTRY — ITS SOIL AND MINERALS, ITS FORESTS, WATERS AND WILDLIFE.
Wild Life and Fisheries Commission—Division of Education and Publicity

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VOL. 9, No. 7

EDITORIAL

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COVER

The box terrapin. Commonly termed the "hardtop convertible" because, in time of danger, the animal completely withdraws its head, legs, and tail inside the strong walls of bone.

photo by Britt

By F. LAMAR CLEMENT

Director

Louisiana Wild Life and Fisheries Commission

While the boys reconcile themselves to the fact that school bells will soon be ringing again, the Dads of this country are spending their leisure hours polishing up their guns, checking hunting clothes and taking inventory of ammunition needs. Which has the brighter picture in mind? True there are some kids who like school, and there are some dads who don't care about hunting, but by and large there are few youngsters who wouldn't dance a jig for joy at the prospect of a hunting trip now and then, and if they only realized it, there are few fathers in this world who could find a bigger thrill than taking their sons hunting.

F. LAMAR CLEMENT

Can you imagine a better incentive to get your boy to study more, earn better grades and higher deportment averages, than the promise that if he came up to expectations during the school week, a weekend hunting trip was in prosepct for him? You were a boy once. Do you remember what such a thing would have meant to you? Perhaps that's where you got your love for the outdoors, your longing to tramp through the woods on a tingling, sunny day; your ambition to become a good hunter and a good sportsman.

Your boy is you all over again, isn't he? Maybe he is only a little tike now, but you don't have to wait until he grows to man-size, do you? As the twig is bent so grows the tree, they say.

The need for genuine conservation of our natural wildlife resources is extremely important and the sooner we face this fact the sooner we will be able to maintain sufficient game birds and quadrupeds for the Louisiana hunter to enjoy his sports afield. It seems only logical as game becomes harder to find that we should seek the real pleasure of teaching the younger generations the true facts of sportsmanship and game conservation and in so doing we may find it a wonderful substitute for the desire of returning each day with the bag limit.

By taking a boy hunting you can first of all teach him to respect guns, teach him the danger that lies in an improperly handled gun; teach him the fundamentals of safe carrying of firearms; teach him the etiquette of gun bearing; let him observe good sportsmen in action and let him get into action with them. There is nothing that so swells a boy's heart with pride as the fact that he is being a part of a real hunting party, striding along with the men who know how to hunt and how to shoot, observing the same rules they observe, listening to their plans and their criticism of unsportsmanlike behavior.

And another thing, give your boy a chance to learn why there must be hunting laws, and why they must be respected; let him learn first hand that all conservation laws have come into being so that he, and the boys who come after him, might enjoy their days afield; let his own experiences in finding a covey of quail, or a rabbit or a squirrel impress upon him the need for habitat, food and protection for these game species. He can learn a lot more that way than he'll take the time to find in books.

It is the most natural thing in the world for a boy to love the outdoors. Encourage that love, enlarge upon it by taking him on a hunting trip as often as you can. When you do, you'll find him less inclined to misbehavior at home; there will be less danger of him getting attached to the wrong kind of companions; there will be less need for you to worry about delinquency. Boys who love to hunt and fish and get a chance to do those things very rarely go wrong as they grow to manhood.

No boy who has a chance to absorb the things to be learned from true sportsmen, grows up to take unfair advantage of his fellow man. His association with genuine sportsmen teaches him first of all to give the game he seeks a sporting chance. He soon learns that no real sportsman is inconsiderate of his hunting companions, so he learns to be considerate of others. By these things he wins the regard of others, he builds a pride in his own sportsmanship, and when he does you can quit worrying about how he'll turn out as a man.

So why not take your boy hunting? As you lead him through the paths in the woods and fields you are setting his feet firmer on the finer pathway of life.

Is Turtle Destroyer Of Fish And Game?

By Dr. Fred R. Cagle
Chairman, Department of Zoology,
Tulane University

Dr. Cagle in his Tulane laboratory.

THE TURTLE ON THE fisherman's hook has led to the general assumption that all aquatic turtles are fisheaters harmful to fish populations. This is the basis of many statements made in conservation publications: "———turtles should be killed whenever possible. This will save many a fish"; "———turtles take a large toll of game fish and their eggs"; "———sportsmen, here's how to kill turtles."

Without exploring the question of the possible value of a fish-eating turtle — and, indeed, many fish-eating animals may improve fishing — we may examine our knowledge of turtle feeding habits to determine the accuracy of the idea that turtles are harmful to fish populations. The few studies of food habits do not support the idea that fish are the primary food of any turtle. Rather, we must conclude that, in general, turtles take whatever food is available and that food preferences are few.

Research, sponsored by the American Association of Fishing Tackle Manufacturers, provides a basis for the general conclusion that some Michigan turtles might be harmful, but that conservation of all species should be recommended except in waters where thorough investigation proves them harmful. It is further stressed that some turtles may be of much value as scavengers, as controllers of aquatic vegetation, or as destroyers of molluscas harboring parasites. All the turtles studied were omnivorous; the bulk of their food was plant material.

The most fisherman-condemned of all turtles, the common snapper, was included in the study and judged not guilty of harming fish populations. Similarly, a study of 735 snappers in Connecticut concluded that the turtle was not harmful to game fish. Let us see what was discovered. Plants constituted 37% of the diet; fish, 30%. The fish were largely suckers, bullheads, sunfish, and perch. Swift moving fish were seldom taken. Crawfish were the third most important food. Ducks composed less than one-half of one percent of the food consumed.

The snapper is a lazy feeder. In all the studies there was a close correlation between the kind of food taken and the amount available. The turtle ate most abundantly of the most easily obtained food.

These conclusions, almost identical with those made by investigators in other regions, compel acceptance of the idea that the common snapper may be of value in some waters and harmful in others. The wise procedure is to investigate before condemnation.

Of all the Louisiana turtles the alligator snapper has the most unusual response to the presence of food. While working the carapace sideways to sink into the mud, the turtle opens its mouth to the widest, rests the chin on the bottom and wiggles a peculiar appendage on its tongue. This appendage is sufficiently worm-like that a hungry fish will attempt to pick it up. A rapid strike by the turtle wins a meal.

The alligator snapper is well equipped to trap its food. The lining of the mouth is not only colored and mottled but is provided with a series of fern-like projections that float upward to conceal the flesh colored throat. This gentle movement in water currents aids much in disguising the gaping mouth.

The tongue appendage changes in appearance with the growth of the turtle. The hatchling has a bright-red and slender appendage; the medium sized turtle has a pink, somewhat shorter one; the larger turtle has an opaque white, stubby appendage. These progressive changes make the "bait" effective in attracting the suitable type of food for the size of the turtle. The slender, red appendage closely resembles several common worms which are fed on by small fish; the appendage of the medium-sized turtle resembles an earthworm fed on by larger fish; the white, thickened appendage of the large turtle closely resembles a shrimp or grub attractive to the largest fish.

The turtles' ability to use a vast array of foods has been of prime importance in their success. Most are not specialized feeders, either in the type of food eaten or in the manner of taking food. They will usually feed on any recently dead animal and in this sense are scavengers, but most species will avoid decaying flesh.

An intensive study of the slider turtle in Louisiana and Illinois emphasizes the wide adaptability in feeding habits. These turtles were captured in traps baited with fresh fish. Turtles taken within the same week from a clear water lake and a muddy stock pool in Illinois had very different stomach contents. Those from the lake had been feeding on aquatic plants available in large quantities in the shallow water near the shore. Those from the stock pond, which was barren of aquatic plants, had been eating fish dying in the shallow water.

Analyses of more than 200 stomachs of the slider turtles of Louisiana by Miss Virginia Minyard of Tulane University similarly indicated the relation of availability to food consumed. Turtles from a shallow pond in the batture lands were feeding on the dominant aquatic vegetation; those from shallow ditches along a highway were eating the leaves of willow and other terrestrial plants growing on the shores. Fish were present in abundance in both areas but certainly were not as easily available as the plant material.

In all the stomachs examined the remains of only one vertebrate animal was found, the tail of a snake.

Review of the seasonal changes in the turtles' food habits indicates a close correlation between the fluctuations in the quantity of any plant or animal available and their presence in the turtles' diet.

The most expert swimmers, the soft-shells, have much difficulty in capturing living fish. Although exceptional in their ability to swim, it is doubtful if they can capture such rapid swimmers as the bass, trout, or pickerel. The professional fishermen of Lake Maxinkuckee, Indiana, associate the soft-shell with the large-mouth black bass — the turtle, following the bass about, to capture food the bass dislodge in their feeding activities. The common "hard-shelled" turtles (the sliders, painted, chicken turtles, musk turtles, mud turtles, map turtles, sawbacks) can not pursue and capture fish.

Turtles differ much in their ability to perceive the presence of food. A bit of food, introduced into an aquarium housing turtles of each of the common types of Louisiana, will be detected first by the soft-shell turtles. These appear to have a better developed sense of taste or smell than any of the others. They become immediately alert to the presence of food and begin a rapid seeking motion of the head, thrusting the long tubular nose alternately into the bottom and upward, that leads them rapidly to the food. The snappers will recognize the presence of food early but will not move toward it for a long time. Finally they will slowly and cautiously move in the proper direction.

These differences in reaction suggest the differences in food-getting techniques. The snapper stalks, depending upon its coloration, its resemblance to its background, and cautious movements to get within striking distance. The soft-shell actively pursues its prey.

The musk turtles and mud turtles, the third to identify the presence of food, swim awkwardly and blunderingly over the bottom in the general direction — a procedure that would enable any active animal to avoid them. The slider, painted and chicken turtles are the next to react to the presence of food, and after a period of irregular, restless seeking they may or may not locate it. The map turtles and the sawbacks are the last to react. Perhaps their diet is the most specialized and they do not identify the meat introduced as food.

The aquatic turtles sometimes seek food on shore. I have observed slider turtles cropping grass along the shore like so many cattle. Their stomachs frequently contain masses of terrestrial grasses. This habit has stimulated some debate. Some authorities have insisted that the aquatic turtles, such as the slider turtle, can not swallow on land but must return to the water each time it desires to store a mouthful of food in its stomach. No adequate answer to this debate is yet available but some zoologists state that the aquatic turtles readily swallow food when out of the water.

The large map turtles and sawbacks feed on snails and clams, a specialization unique among the Louisiana turtles. An entire snail or clam is crushed before swallowing. The jaw, admirably modified for this type of feeding, is broad, flattened, and somewhat spoon-shaped. The upper jaw fits against it to form an excellent crushing device. The young turtles feed on thin-walled snails or insects and the older turtles select large, thick-shelled molluscas. The feeding difference is correlated with the changes of the jaw during the life of an individual. The small map turtle has no heavier jaws than other turtles but the surfaces broaden rapidly in proportion to the head size and by the time sexual maturity is attained the jaws are flat and spatula-like.

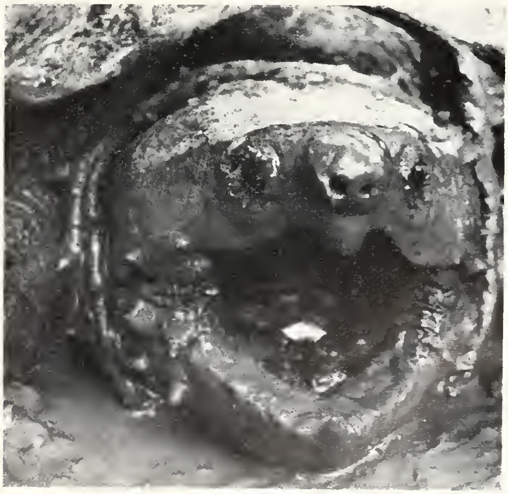
The long toe claws of the male slider turtle have been called modifications for food gathering. Knight, 1870-71, states, "It has upon its forefeet three claws of ordinary length and two of an enormous development, they being often found nearly three inches long. The reason for this elongation was not apparent, until by close observation from a boat at the mouth of the river Wakulla, the speaker saw two turtles of this species thrusting these long claws into the holes made by some worm, with which the hard clay bottom of the stream was everywhere perforated. The transfigured worms were probably the common food of this turtle." The use of the elongated claws of the male turtle for this purpose have not been observed elsewhere. It appears doubtful if the claws are used for this purpose. Observation of turtles under water is difficult and Knight may have mistaken the food-searching gestures of the head for the claw movement.

The alligator snapper, the largest American fresh water turtle, has been known to reach a weight of 219 pounds.

Various turtles have been repeatedly condemned because of chance observations of one or two individuals eating something considered of value to the observer. Such single observations may result in suggestions for mass destruction of the kind of turtles concerned.

An excellent example of this is the long time accusations

(Continued on page 24)



Snapper lures prey with artificial "Worm," lower right. Center white spot is tongue to which it is attached.

The Hunting Season

Beginning with doves on September 1 and closing with rabbits and quail on February 10, the 1957-58 hunting season as set up by the Louisiana Wild Life and Fisheries commission offers the Louisiana hunter 148 days afield. Listed below is the season and limits on various game birds and animals established by the commission.

DOVES: September 1 to September 15 inclusive. November 27 to January 10 inclusive. Hunting from noon to sunset only. Bag and possession limit 10.

RAILS and GALLINULES: October 1 through December 9 inclusive. Bag and possession limit is 15 except Sora which is 25.

SQUIRRELS: October 18 to January 15, 1958 — 10 per day; possession limit 20. Contingent on the fire condition of the woods — possible 10-day delay.

RABBITS: November 13 to February 10, 1958; 5 per day

BEAR: Closed

QUAIL: November 28 to February 10, 1958 — 10 per day; Possession limit 20.

WOODCOCK: December 12 to January 20, 1958 inclusive. Bag limit 4, possession limit 8.

TURKEY: Regulations for this season are to be set in January 1958 when dates and parishes are to be announced.

DEER: 1 buck per day; 2 bucks per season; dates given below:

The general statewide deer season will open on Dec. 1, 1957 and run for variable periods of time according to the deer population. All game Management Areas will be closed unless otherwise specified. Only those areas specifically designated below will be open to deer hunting for the period indicated; the remainder of the State will be closed.

Dec. 1-7 inclusive: Allen Parish: Beauregard Parish—East of Hwy. 27; Evangeline Parish; Rapides Parish — South and West of Red River; Sabine Parish — West of the following described line Hwy. 171 from Vernon-Sabine Parish line to Florien, west on La. Hwy. 474 to Dess and across to Negreet, north of La. 476 to Junction of La. Hwy. 6, then west on La. Hwy. 6 to Junction of La. Hwy. 475, then North to Zwolle and North on U. S. Hwy. 171 to Sabine-DeSoto line; Lincoln Parish — South of Hwy. 80 and West of Hwy. 167; Jackson Parish — All of Parish except the area enclosed by Hwy. 4 from Weston to Chatham, thence along Hwy. 146 to Vernon Lookout Tower, thence along the road to Beech Springs, and thence along Hwy. 542 and 811 to Weston; Caddo Parish — *Still Hunting Only* — North of Hwy. 80 and West of Hwy. 1. Bossier-Webster — *Still Hunting Only* — The area enclosed by La. Hwy. 3 from Arkansas line to Plain Dealing — Hwy. 2 from Plain Dealing to Sarepta and Hwy. 7 from Sarepta to Arkansas line.

Rabbit hunting is rapidly becoming one of the most popular outdoor sports throughout Louisiana as more sportsmen are turning to Beagle hounds in pursuit of the cottontail.

Dec. 1-14 inclusive — Vernon Parish — west of Hwy. 171; Claiborne Parish — the area enclosed by Hwy. 79 from Arkansas line to Homer and Hwy. 9 from Homer to Arkansas Line; Barksdale Air Force Base in Bossier Parish.

Dec. 1-Jan. 1 inclusive — Morehouse Parish; West Carroll Parish; East Carroll Parish; Madison Parish; Tensas Parish; Concordia Parish; St. Tammany Parish; Union Parish —East of Missouri Pacific Railroad from Arkansas Line to Litroe to Sterlington; Franklin Parish — East of Hwy. 15; Catahoula Parish — East of Ouachita, Boeuf and Black Rivers and south of Hwy. 84; LaSalle Parish — South of Old River and Catahoula Lake; West Feliciana — West of Mississippi River.

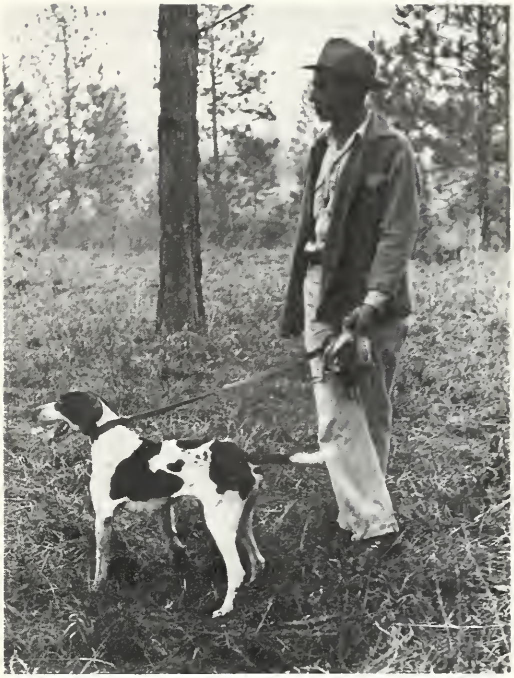
Dec. 1-Jan. 10 inclusive — Avoyelles Parish; St. Landry Parish; Pointe Coupee Parish; West Baton Rouge Parish; Iberville Parish; St. Martin Parish; Vermilion Parish; Iberia Parish; St. Mary Parish; Terrebonne Parish; Assumption Parish; Ascension Parish; St. John The Baptist Parish; St. James Parish; St. Charles Parish; Lafourche Parish; Jefferson Parish; Plaquemines Parish; St. Bernard Parish; Orleans Parish — Area bounded by Cut Off Road, Ammunition Dump Fence, Mississippi River and Plaquemine Parish Line; Livingston Parish — South of Hwy. 190; Tangipahoa Parish — South of Hwy. 190; Beauregard Parish — West of Hwy. 27; Calcasieu Parish — West of Hwy. 27.

Dec. 6 - Jan. 1 inclusive — Winn Parish — South of Hwy. 84 and east of Hwy. 167; Grant Parish — West of Hwy. 165 and north of Hwy. 8; Natchitoches Parish — the Area enclosed by Hwy. 6 from Hagewood to Natchitoches, Hwy. 1 from Natchitoches to Derry, Hwy. 119 from Derry to Gorum, the road from Gorum to Mink to Kisatchie and from Kisatchie to Hagewood on Hwy. 117.

*Catahoula National Wildlife Management Preserve in

(Continued on page 17)

The Hunting Outlook



Considered by many outdoorsmen to be the king of sport is the shooting of quail over the point of the pedigreed bird dog.

The hunting outlook for game birds and animals in Louisiana for the 1957-58 season looks bright from an over-all angle according to biologists and technicians of the Louisiana Wild Life and Fisheries commission.

Louisiana hunters will take to the field on the afternoon of September 1 when the first half of the 1957-58 dove season opens for 15 days. They will go afield again on October 1 for the opening of the rail and gallinule season and hunting of some game or birds will run through February 10.

Following is the forecast of biologists of the Louisiana Wild Life and Fisheries commission on what the hunter can expect in the many sections of the state during the approaching seasons:

QUAIL

Robert Murry, Project Leader

It is impossible to give an accurate statewide forecast of hunting season quail populations in mid-summer. As stated in the past, "carrying capacity" is approached or reached annually on most of the occupied quail ranges of the state. This carrying capacity is often modified, for better or worse, by man with his manipulations of the land. While the application of stringent cotton acreage controls, the increased use of mechanical corn pickers, the amount of land placed in the soil bank, etc., may each have a considerable impact on local quail conditions, they do not affect the success of the hunter in the non-agricultural sections of the pine belt.

Within the frame work of a potential carrying capacity, which is closely related to the activities of man, weather seems to be the most important single factor regulating the number of quail available for the hunters each season. Frequent summer rains are a necessity for a high degree of nesting success. Summer rainfall also regulates the amount of annual foods produced, thus affecting the survival of quail and partially regulating the dates of movement to the woods and the return to weed and grass cover in late winter. Since availability of quail to the gun is also very important, the dates of the first killing frost, the amount of winter rains and the hunting season temperatures are important to hunting success.

Our recent studies have shown that rearing success varies greatly in different areas within the state during a given year. For instance, the 40 adults and all of their offspring that it took to make 100 hunting season quail in Westcentral Louisiana would have, with their greater rearing success in Northeast Louisiana last year, furnished 190 quail.

In 1955, 32.4% of the juveniles of one area of the state hatched after the first of August. In the same general area in 1956 only 3.4% of the population was made up of birds in this age group. This should clearly show that a biologist without a very good crystal ball cannot give an accurate forecast in mid-July.

Incidentally, consolidated data from throughout the state indicates that the 1956 forecast was very close to what actually occurred. Of course, if you hunt in East Carrol parish the estimate shot way too low for you and if you hunt in Vernon, it was too high.

With the frank admission that we have far too little information on certain areas of the state and with the reminder that local weather conditions from this date on are extremely important we hazard the following estimate:

Longleaf Pine Belt of West and Southwest Louisiana: GOOD, better than last year — more longleaf mast and annual weed seed to hold birds out of the bottoms.

Northcentral and Northwestern Louisiana: GOOD, better than last year — a bumper crop of partridge pea, common lespedeza, goatweed, etc., in old fields.

Northeast Louisiana: GOOD, not much change from last year.

Flatwoods and Rice Growing Regions of Southcentral and Southwestern Louisiana: Probably POORER than last year—very dependent on a good late hatch.

Florida Parishes: Around agriculture, GOOD, about like last year. Away from agriculture, GOOD, better than last year.

Lower Mississippi and Atchafalaya Floodplain: GOOD, about the same as last year.

DEER

Carroll J. Perkins, Study Leader

The Louisiana deer hunter will again find the deer population little changed from that of last year. Again, seasons

(Continued on page 16)

Mr. Wildlife . . . . McIlhenny

By Ednard Waldo

THERE'S A BEAUTIFUL new exhibit featuring herons and egrets at the Louisiana State University Museum of Natural History but the man who saved them from extinction won't be there to see them because "Mr. Ned" who loved them so well passed away almost a decade ago.

The display which exhibits 32 birds, snakes and frogs and alligators, all appearing lifelike in their settings among water hyacinths and trees has been dedicated as a memorial to the late Edward Avery McIlhenny founder of the famous "Bird City" of Avery island which he began in 1885 as a sanctuary for eight of the vanishing egrets. Today the colony of birds he established still exists and has grown to an estimated 120,000 birds and remains as a living memorial to its founder who with the aid of the Audubon society fought courageously in Congress to outlaw the slaughter of wild birds and saved not only the egret but many other species from total extinction.

The LSU exhibit portrays a section of the "Bird City" rookery and was constructed by P. Ambrose Daigre, curator of the museum, who has re-created part of the Avery island sanctuary with a painted scenic background with the birds and reptiles mounted and shown in the swampy and flowery foreground of their natural habitat.

In accepting the donation, which financed the memorial from McIlhenny's daughters, Dr. George H. Lowery, director of the museum said, "We consider McIlhenny one of the greatest men Louisiana has ever produced; as a conservationist he was 50 years ahead of his time."

Section of the McIlhenny memorial exhibit showing the snowy egrets which he saved from extinction.

Dr. Lowery is not alone in his praise of Louisiana's great conservationist for it may well be said when the future historian looks to the 20th century for legend to match the deeper color of the past, the life and exploits of McIlhenny will serve him.

Born March 29, 1872, on the almost feudal estate of his ancestors at Avery island, McIlhenny, like the great naturalist Steller, was gifted with an insatiable curiosity and a pioneering spirit which guided him throughout his life.

When he was 21 years old, McIlhenny turned his back on his college days and sailed away with Dr. Frederick Cook to the unchartered wastelands of the Arctic. The hardships of the Cook expedition and its exploits are now indelible history. McIlhenny was with it when it met disaster. Three years later, undaunted by his first harrowing experiences, he equipped his own ornithological Arctic expedition and led his men to Point Barrow and from there he and his men journeyed further over the Arctic wastes to rescue a crew of 120 men shipwrecked on Sea Horse Shoal. One of the men rescued was named Jack London; his name is also history.

After gathering ornithological specimens from the Arctic and writing a dictionary of the Eskimo language, he returned home and married Miss Mary Matthews, a Mardi Gras queen.

At Avery island he settled down to a lifetime study of the flora and fauna of his native state and to the development of the island's resources, its salt mines, and the internationally famous Tabasco sauce industry founded by his father.

McIlhenny's contributions to scientific lore are legion. He brought to the the island strange plants and animals from the four corners of the world. During his waking day, which lasted from 4:00 a.m. to 10:00 p.m., he found time to write books on the wild turkey, Bird City, alligators, negro spirituals and to gather first hand information on Louisiana bears by capturing one himself and raising it. A pioneer photographer, from the days of the "wet plate", he kept a huge file of photographs he had made. Perhaps one of McIlhenny's greatest contributions to ornithology was his laborious and long-continuing bird banding operations that culminated in the bird banding during his lifetime of the phenomenal number of 189,298 birds.

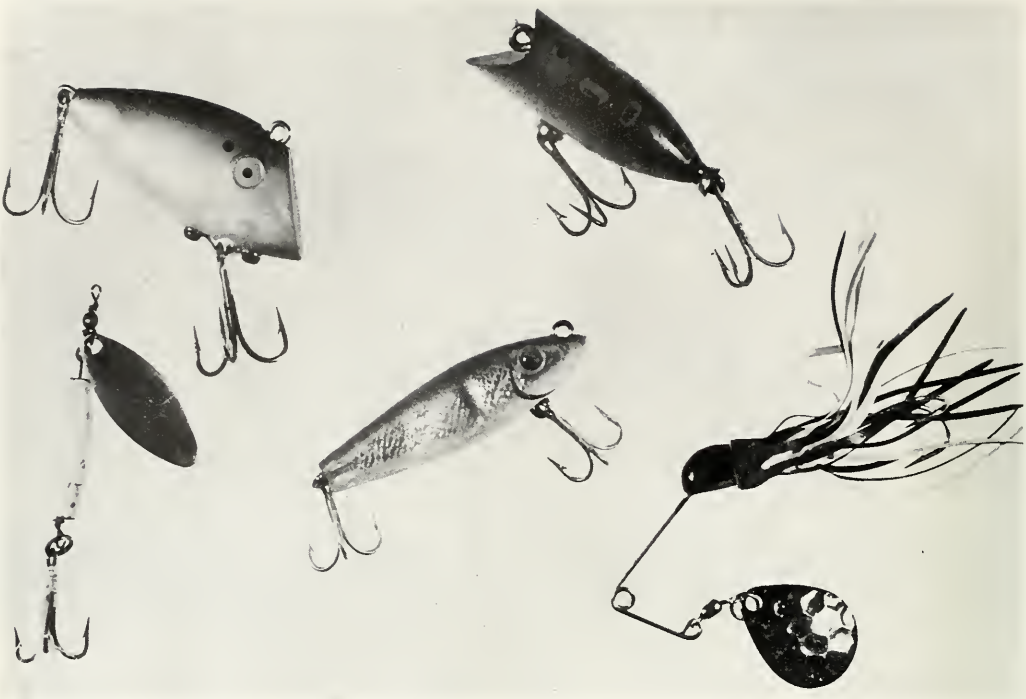
On the island, a jut of land in the Gulf of Mexico eight miles from New Iberia, he ruled over his 700 men and women employees and their children as a benevolent father. All looked to him in their troubles as an amateur physician. He set their bones and administered to them. If they were gravely ill he promptly called an ambulance. He gave them a living, built them a school, which is state operated, and it was to "M'sieu Ned" the children brought their report cards to be either admonished or rewarded with nickels.

On the island robbery was almost unknown and all looked to "M'sieu Ned" for advice and comfort.

There he built a paradise of flora and fauna and it became world famous for its exotic plants. His camellia collection, which is probably the most complete in the world boasts of 50,000 specimens which bloom side by side with

(Continued on page 18)

"his is the legend to match the deeper color of the past . . ." →



Shown here are several types of small lures that have been bass favorites in Louisiana waters during the past few years.

Small Lures For Bass

By W. C. Goins

WITH PROGRESS always come changes—changes that even affect our fishing as many bass fishermen have discovered. Some of the old favorite lures seldom produce good catches anymore. Some other favorites of more recent vintage are not as good as they were six or eight years ago. Some have been laid aside after offering hours of enjoyment for a year or two.

In the last five or six years, the trend has been to smaller bass lures. With their advent came longer and lighter casting rods that would enable the fisherman to cast these smaller lightweight lures. The reels have also been modified so that they are lighter. In place of heavy brass or steel gears, they are now being made of nylon. In place of the conventional wide spool, what was once considered a tournament reel is now standard equipment in most places. The narrow spools provide more speed in casting.

The latest, at least in this country, solution to the problem of casting small lightweight lures is the spinning outfit. While looked upon with disfavor in the sections of the country where the dry fly "purist' is supreme, the spinning outfit has won a place for itself in many places. This kind of fishing outfit has enabled the bass or trout fisherman to master the art of casting in minutes. Those who do not become fairly good with the rig can at least, cast well enough to catch fish. Not often do we see anyone engaged in "backyard' practice. In fact, the spin-fishing has become so popular that many of the tackle manufacturers are turning out tackle of this type capable of handling many species of our salt water fish.

The introduction of spin-fishing in Louisiana was not a rapid process. In fact, there are still a lot of dyed-in-the-wool bait casters who still maintain that they can catch as many fish as the spin-casters. In some instances this certainly is no understatement. When fishing in a stumpy or brushy place or where there are numerous other obstacles in a lake where a bass may become entangled, the spin-fishing outfit is of little advantage.

One of the redeeming features of a spinning outfit is that the entire rig is lightweight and this goes for the line as well. Here in this state the six-pound line is probably the most common and once a bass gets this line wrapped around a log his next lunge will usually break the line. The light line permits no "horseing" of the bass, whatsoever. In open water, however, a six-pound line is capable of handling and landing a fish of several times as much weight.

In two of our North Louisiana lakes the spin-fishing method has proven to be of decided advantage. In Black Lake and also, in Lake Bistineau where the bass school in great numbers, the equipment is tops. These school bass are easily located when they come to and feed at the surface and when they disappear, they may usually be expected to surface again in the immediate vicinity. Many times they will appear just beyond casting range but with the spinning outfit the fisherman is able to reach them with his lure and boat a few.

Most fishing authorities agree that distance of the cast is not to be considered primarily as one of the objectives to be sought when learning to fish. There are many places, however, that this feature should be given consideration. In the southeastern part of the state there are several rivers that are good bass producers. Quite a few of the fishermen using these streams do so from the banks without aid of boats and in this case, a long cast is certainly of great advantage. Using fairly light lures, the fisherman can usually fish the other side of the stream from one bank.

Along the coastal area of the state where the speckled trout fishing is prominent, the spinning equipment has really come into its own. Many of the fishermen in that area have learned that this type of fishing can provide thrills they never dreamed of when compared to the use of much heavier casting outfits. They have also learned that with the spin-fishing gear, smaller lures may be cast with ease and also, that these smaller lightweight lures can make the difference between average and good catches.

Then too, many of the speckled trout fishermen like to wade out from the shore to fish and the greater or longer cast the spin-fishing gear permits is to a great advantage. They can now fish farther from the shore than was formerly possible.

Another incident occurred recently to further illustrate the effectiveness of the spin tackle. It happened at Coos Bay, Oregon where fishermen are claiming a world's record for the tackle. A halibut was landed that weighed 74 pounds, one ounce by Paul McDonald of that city. In one and a half hours the fish was landed on eight-pound test line. It topped the former record of 43 pounds, eight ounces set in 1954 at about the same location.

Around the turn of the century a bass lure measuring four to five inches was not at all uncommon. Some came decked out with as many as 15 hooks and once a bass came in contact with them, he rarely escaped. Unless the fisherman is around some very large bass, this lure will scare off more bass than it will catch today. Many of our tackle manufacturers are turning out lures with a single hook and the trend seems to be, the smaller the lure, the better.

One good illustration of the above may well be the bucktail lure. It consists of a single hook, a moulded piece of lead, a deer hair streamer called a bucktail, feather streamer, or rubber or plastic skirt. Ask a local fisherman if you don't think these small lures catch the bass.

The author illustrates how effective small lures are in fishing for bass.

Small lures, properly hooked, often land large bass such as the one above.

Why all this sudden change to the smaller lures? Only the most successful bass fishermen can answer this question. The fact is that the large lures do not produce in most of our Louisiana lakes. In some of the clear-water rivers they still get the job done and quite often, too.

The bass fisherman who catches the most fish is the one that will use whatever lure will take the most fish. Many of the fishermen, however, are content to fish the lures of their choice. They fish the one or ones they get the most pleasure out of using. Many of them are content to catch a few bass on their favorite plug and let it go at that. However, if you want to catch more bass, try the spin-fishing outfit with small lures. You may be surprised at the number of crappie and bream you will also catch while fishing for bass.

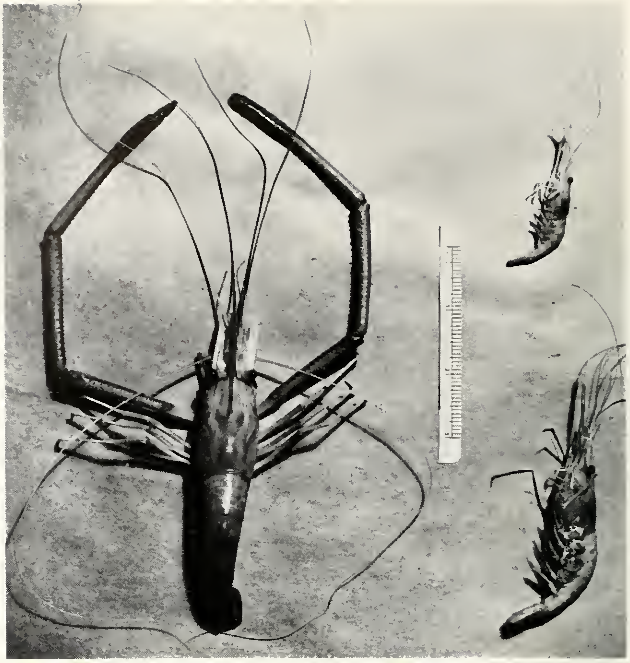
FISH FLOUR—A WEAPON AGAINST PROTEIN MALNUTRITION

Because fish meal can be processed in such a way as to remove the "fishy" taste and odor, it can become an important weapon against protein malnutrition in the vast underdeveloped areas of the world, Dr. James M. Hundley, nutrition adviser to the United Nations' International Children's Emergency Fund, declared in February 1957. Hundley reported that several processes have been developed by which either fresh fish or dehydrated fish meal can be defatted, deodorized, and finished as an almost tasteless, odorless, nearly white flour.

Speaking before the Conference on Protein Nutrition in New York, under the joint sponsorship of the New York Academy of Sciences and E. I. duPont de Nemours & Co., Hundley said that such flour contains 70 to 80 percent protein and relatively small amounts are needed to supplement bread and other cereal products. Estimates are that only about one-fourth cent a day would be required to supplement a child's diet effectively with fish flour.

Shrimp Potpourri

By Percy Viosca, Jr.



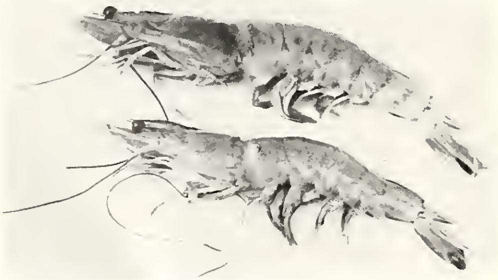
The giant delta shrimp, left, adult male, *(Macrobrachium acanthurus)*. Lower right is female of same species. Upper right is the common river shrimp, female *(Macrobrachium ohione)*. Reduced to 1/2.

TO MOST OF US a shrimp is just a shrimp; to be dunked in sauce or enjoyed in gumbo or jambalaya and in the many ways our gourmets have developed for preparing them over the years. However, there's really a big story behind this crustacean that Louisiana gives to world markets in such abundance.

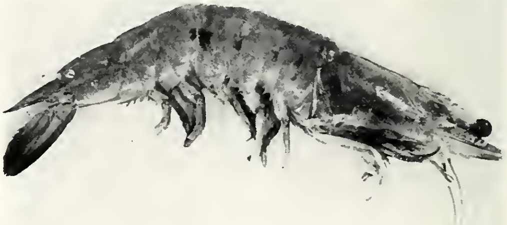
Many kinds of shrimp find conditions favorable for their existence in Louisiana waters and the nearby Gulf of Mexico. The habitats are varied and sometimes extensive, and the actual populations of the different species and their relative abundance result from the interaction of many factors, among them: the physical and chemical qualities of the water, the nature of the bottoms, the kinds of vegetation or the lack thereof, the effects of competition and predation, and the availability of foodstuffs. Some species exist in unbelievable abundance, and the larger kinds support a vast industry.

From early colonial times, two shrimp species were plentiful on the New Orleans markets; and no doubt the common names of these, "river shrimp" and "lake shrimp", originated in that city. The term "lake shrimp" referred to the most plentiful of our migratory salt water species, the young of which appeared in Lake Pontchartrain every summer, sometimes in great schools.

Baited traps were employed for snaring river shrimp, and cast nets and seines for taking lake shrimp. No doubt we learned our trapping methods from the Indians, but the nets first employed in Lake Pontchartrain were brought over from France (Du Pratz, History of Louisiana). To this very day, and now more so than ever, one of the favorite pastimes of New Orleans people on summer nights is to go cast-



The White Shrimp *(Penaeus setiferus)* For many years our most important species and mainstay of the shrimp industry of the northern Gulf of Mexico. Above, adult female which averages somewhat larger than male, below, sometimes approaches ten inches.



The Pink Shrimp *(Penaeus ducrarum)* Relatively rare along Louisiana coast, numbers harvested increasing since advent of night trawling. On this female note dark spot at junction of fourth and fifth tail segments.

netting for shrimp along the seawall which skirts the north side of the city. On favorable nights, shrimpers number in hundreds and spectators in thousands.

Early in the century, biologists, who were then few and far between, recognized additional shrimp species as being present in our waters. These either went unobserved by the consuming public, or were considered merely as curios or rare specimens. Seiners, however, who ventured outside, along the Grand Isle beaches or near the mouth of Bayou Lafourche, long recognized a small sea shrimp which they called by various names, such as "sept barbe" and "seabob" Large catches were sometimes made by seining the beaches during favorable weather, but ice was a scarcety during these sailboat days, and inland consumers knew not of their existence. The bulk of the seabob catch was dehydrated on sundrying platforms which dotted the coastal bayous and shipped to Chinese colonies the world over.

Ice boats came after the turn of the century and gave a boost to a struggling canning industry. Also, about this time, gasoline engines slowly came into use. The otter trawl was first tried in 1915 and its use increased rapidly. With the advent of power boats and the development of sea going trawlers, the shrimping grounds were greatly extended, and both drying and canning industries grew by leaps and bounds.

Today the most valuable of Louisiana's seafood harvests is its shrimp crop which leads the world with an annual take of nearly 300,000 barrels or approximately 100,000,000 pounds valued at upwards of $30,000,000. Whereas, there were some 1000 small trawl boats operating in 1927, today there are 3500 now operating and many of them are of the super deep-sea type. On the present market shrimp are bringing as high as $136 per barrel in comparison with an average of $3.00 per barrel in 1927.

There must be an answer for such development and of course there is a logical one. Nowadays, due to the development of refrigeration, new methods of harvesting, canning, packing, new preserving techniques and rapid transportation, Louisiana shrimp are reaching world wide markets never before dreamed of. This subsequent demand is calling upon the ingenuity of gear developers, exploratory fishing and technological researchers. The latter are under the supervision of the Wild Life and Fisheries commission which works toward this end in cooperation with other governmental agencies.

It was not so many years ago that a shrimp course was practically unknown to the tables of the average American home. Aside from the menus of the famous gastronomical emporiums of the nation the Louisiana shrimp was strictly for the table of our native population. Today the Louisiana shrimp is known to the tables of our entire nation and abroad. At the New Hilton hotel in Istanbul, for an instance, Louisiana shrimp are a daily feature on its menu and served as casually and in as much profusion as though they had been seined that morning from the waters of the Bosporus.

The Seabob *(Xiphopeneus kroyeri)* A long name for a short shrimp which seldom grows over four inches. Is still an important species in the dried shrimp industry and is sold on other markets when large shrimp are scarce.

Development of refrigeration, new methods of harvesting, canning, packing and preserving techniques assure this shrimp fisherman of markets never before dreamed of by his forefathers. These very shrimp might be served in restaurants in London or Istanbul, Cairo or anywhere on earth.

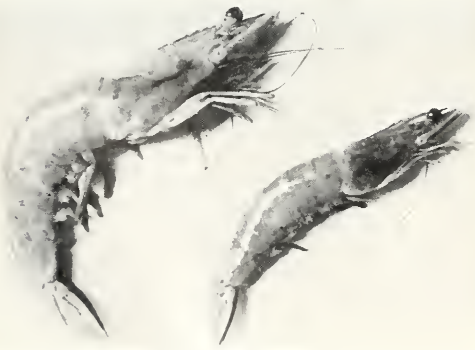
At the present time the Louisiana shrimp industry gives employment to 37,000 persons and is valued at $76,000,000 in equipment. Today it is no longer a matter of going out in a small boat and bringing back a pay load. Trawler hull designs have been changed and gear has been developed to handle shrimp faster and with more facility. Navigation aids, such as radar, fish finders, ship-to-shore radio, fathometers and other gear are now in reach of not only the big operators but also the small independents. Now the small boats may also venture far from shore with comparative safety and are no longer relegated to their immediate home waters and the use of shoreline landmarks. Electronic devices have become as familiar as the compass to these men whose fathers and grandfathers shrimped with sail power.

Yet all this remarkable growth presents a strange paradox which demonstrates the old adage that "you cannot catch all of the fish in the sea", because it has been pointed out that whereas in 1927 when there were 1000 small trawl boats operating with one or two-man crews there are 3500 now operating and there has been virtually no change in the per unit production of shrimp since that time. Which means that whereas some of the large trawl boats bring in 50 barrels and smaller ones may bring in as little as one-half barrel their total take averages out the same. Which demonstrates the high production has been consistent and continuous for years and that although more than three thousand trawls are now operating with the most modern equipment there are still shrimp there for everyone who wants to, and knows how, to trawl.

Additional shrimp species have now entered commercial channels. It was noted that one fairly abundant species differed from the common lake shrimp in that the head and tail regions were adorned with grooves, whereas in the lake shrimp there are no grooves. Confused with another grooved shrimp, this species became known as the "Brazilian shrimp". Today we recognize two grooved species here, better known as brown and pink shrimp, but neither is the true Brazilian shrimp, which has not been taken in the Gulf of Mexico. The whitish "lake shrimp" of olden times has now become known as the "white shrimp" to better distinguish it from the more colored species.

The brown and pink shrimp resemble each other in many respects, but have very good distinguishing characteristics, and their habitat preferences differ materially. On the other hand, immature brown and white shrimp occupy much the same nursery grounds, and although their spawning seasons and ranges differ somewhat, there is considerable overlap. The brown and white species, therefore, can be considered competitive. The pink shrimp, on the other hand, is relatively rare in Louisiana, largely for lack of suitable habitat, and it does not compete seriously with other species. Where the habitat is favorable, as on the fabulous shrimping grounds discovered near Dry Tortugas and Campeche in recent years, the pink species is found almost to the exclusion of the others.

During the past several years, catches of the two native grooved shrimp, the browns and the pinks, have increased considerably. This is partly the result of night trawling and partly due to an extension of the fishing grounds with increased knowledge of their habits. Part of the increase may also be due to the higher salinities on the nursery grounds as a result of the prolonged drouth in the mid-continental area and lack of fresh water from the Mississippi River. This is believed to be a factor favoring the two grooved species to the detriment of our more familiar white lake shrimp.



The Brown Shrimp *(Penaeus aztecus)* is now becoming increasingly important in the northern Gulf. Above, adult female, ranges from seven to nine inches or more. Male, below averages a little over six inches.

Biologist Percy Viosca selects representative male and female brown shrimp for study as shrimp are brought in from the trawlers for processing and packing.

There are also found in the northern Gulf, thanks to the operations of the U. S. Fish and Wildlife's fishing vessel "Oregon", some exquisite-tasting, deepwater shrimp, all red in color; and it seems that commercial possibilities for these exist. Less shrimp-like in form are the so-called "rock shrimp". The writer rates both the red and rock shrimp as food for gourmets, but we must await their arrival on the market place.

Another newcomer in the commercial field but of a different nature, is a giant, non-migratory, brackish water shrimp which has established itself in the Delta of the Mississippi river. This is closely related to our common river shrimp, and seems to be replacing that species in the smaller passes of the river and in the small bays which lie between the fingers of the Delta.

Then there are a number of kinds of smaller shrimp, both in fresh and salt water. These are important in the economy of our waters and serve to relieve some of the predatory pressure on our commercial species. Several kinds are used for bait and are sold by bait dealers for fresh or salt water fishing, as the case may be.

If you are interested in learning more about the shrimp you eat or use to bait your hook, remember that color may be a poor criterion for distinguishing species. Shrimp all possess the chameleon-like power of changing color to match their surroundings. Fortunately there are other characters which enable us to tell them apart, and the shrimp fishermen and bait dealers are rapidly learning to identify the different kinds.

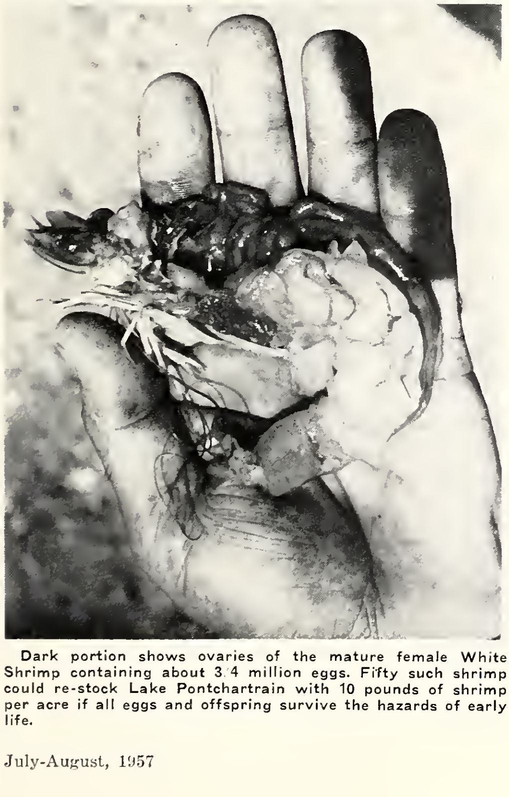
The Free-spawning Shrimp

The sea-shrimp we utilize for food are misunderstood by laymen who never see their eggs or babies, as they do with most other familiar creatures, such as crawfish, birds, alligators, etc. This is in part because of the remarkable migrations of these sea shrimp, on a par with those of the salmon and the common eel, and in part because of the complicated transformations their very young undergo before they even look like shrimp. Anybody can recognize a baby crawfish, but a baby shrimp, that's a different story.

Our edible sea shrimp deposit their eggs freely in the waters of the Gulf, and there is no parental protection. They are at the mercy of the ocean currents and whatever adversities these may bring. Such free-spawning creatures must of necessity produce much greater quantities of eggs, by at least a thousand-fold, than related species which protect their eggs to some extent.

The eggs of free-spawning shrimp hatch into very simple larvae, mite-like in appearance. These undergo a number of transformations, each more shrimp-like than the preceding, but all early stages are carried about at the mercy of the currents. Only advanced larvae which are fortunate enough to be carried onto favorable nursery grounds will survive the hazards of early life and transform into little shrimp such as those we find later in the lakes.

Once in inside waters or on other suitable nursery grounds, the young shrimp grow rapidly. Upon nearing adolescence, those on the inside return to the sea from whence they came. Here they make their final transformation into full-blown adults, which in the larger species, we call "jumbo" shrimp. Those most important in the current fishery are discussed separately below.



Dark portion shows ovaries of the mature female White Shrimp containing about 3/4 million eggs. Fifty such shrimp could re-stock Lake Pontchartrain with 10 pounds of shrimp per acre if all eggs and offspring survive the hazards of early life.

"Do Unto Others As You Would Have Them Do Unto You"

Biologist Percy Viosca shows our new giant river shrimp which promises to become one of the table delicacies of the gourmet world. The difference in size may be seen from the common river shrimp shown below in comparison. People who are too lazy to eat the common river shrimp will welcome its big brother.

The White Shrimp (*Penaeus setiferus*)

Common Names: — for young: white shrimp, lake shrimp, white lake shrimp, creole shrimp, season shrimp, spring shrimp (in spring only); for adults: jumbo white shrimp. Gulf prawns.

For many years the white shrimp has been our most important species and the mainstay of the shrimp industry of the northern Gulf of Mexico. Before the adults (prawns, jumbos) were generally recognized as the same species, young white shrimp were sold under the common name "lake shrimp" to distinguish them from the smaller "river shrimp".

The first young white shrimp born in any given year make their appearance along our shores by early June, and are mostly less than an inch long. These migrate away from the sea as summer advances, growing rapidly and attaining lengths up to six inches and more by the end of August. Upon reaching sizes averaging around six inches, they begin to move back to the sea from whence they came, never to return to inside waters.

In any given year, the last young recruits from outside waters enter the nursery grounds in the early fall, but growth of these is retarded by cold weather. These resume growth the following spring, hence this crop of young white shrimp is called the "spring shrimp". Virtually all of these grow up and return to the sea before the summer solstice. Because of the regular seasonal appearance of great schools of white shrimp in coastal lakes, they are sometimes known as "season shrimp".

In the sea, adolescent white shrimp transform into adults,

(Continued on page 20)

Hendrik Vanderwall, internationally famous Dutch artist, gives his on-the-scene impression of hurricane Audrey.

Wild Life Commission Aids In "Audrey" Disaster

By Ednard Waldo

"THE MAN WAS CLINGING to the remains of a roof top when we got him off into the boat. His right index finger was missing and his face was badly swollen. 'Snakes', he mumbled, 'three of 'em. My stomach's all chewed up too. I dunno what did it, I kept falling off and something kept biting me. There were seven of us but we kept getting washed off and everytime there were fewer that climbed back; I'm the only one left.' "

"We got the man in the plane that had spotted us and he wasn't crying or complaining even though we had no water or food to give him as we hadn't had anything ourselves for 24 hours. The plane took him off to Lake Charles, we don't know what happened to him after that, we just went on looking for more survivors."

This was a typical story of one of the crews of 32 boats and two airplanes sent into the aftermath of Hurricane Audrey by the Louisiana Wild Life and Fisheries commission. They were among the first to enter the storm torn area by orders from Director F. Lamar Clement and Rudolph P. Easterly, Chief of the Enforcement Division who directed the operations of more than 100 men of the division.

During the 24 hours that preceded the arrival of Hurricane Audrey, Chief Easterly, assisted by Captain Thomas D. Rayburn, had withdrawn his boats from the danger area and held his men in wait to go into action. As Audrey lost herself to the north, the men went feverishly to work getting into the Cameron area. The commission's 300-foot radio tower at Pecan island was blown away, however, other communication towers, also put out of commission, were immediately re-activated. Meanwhile Easterly was receiving frantic calls from Abbeville advising that the people of Cameron parish were without food and water and that hundreds of survivors were clinging to debris over the marshlands. At Abbeville the power for the radio station had gone out but the ingenious station operator had connected his automobile generator to the station and calls were getting out. At Baton Rouge, Easterly dispatched enforcement captains and game agents from all over the state to the disaster area and all radio towers were alerted to stand by.

They arrived by plane, automobile, trucks and boats and marshalled in and around Abbeville and at Chief Easterly's signal moved into the wake of the storm.

Then began the feverish operations to get to the survivors. The commission's two amphibious planes moved in on the commission's Fur and Game Refuge at Pecan island and began the rescue of 80-odd persons who they picked up from the wreckage spread over the marshes and ferried to Lake Charles. The planes sent from New Orleans by Chief Pilot John Ellington were manned by pilot Nat Pedro and mechanic John McGovern and Pilot Preston "Buck" Davis and Tom Clements, a special agent, who had volunteered to serve as mechanic.

On return trips from Lake Charles the planes brought water and gasoline for the small boats operating in the area. There was no time to stop or eat, the main objective was to get the living from the snake infested masses of wreckage. There was no time then for the dead and men went 12 hours without stopping. On land the crews encountered telephone poles and wires which cluttered the roads. Masses of dead cattle, alligators, snakes, nutria, muskrats blocked the intracoastal canal at points. Obstacles for the 30 small boats were many and work went on round the clock.

"We didn't let up until we got every live person off the Pecan island area and then we started looking for the dead. The Navy and Coast Guard were working side by side with us by then and we started spotting the dead and the planes put down markers . . . .there wasn't time to pick them up. . . ," Pilots Pedro and Davis said. Another pilot who figured heroically in the rescue work was J. H. Lamb, Jr., of Lafayette, pilot of the Pan-Am Oil Company's amphibian. "He was along with us all the time, we don't know how many he saved," they said.

Meanwhile at New Orleans a full crew manned the radio tower relaying messages and dispatching aid. The men, headed by Assistant Chief Julius Book, were Captain Anthony Berni and Agents B. C. Dahlen and Frank Trocchiano. None left their stations for the duration. Late in the day, Captain Book received a call from Abbeville that typhoid serium was badly needed for the victims. Agents Frank Trocchiano and Louis Barattini immediately contacted Dr. George Hauser of the Board of Health of New Orleans and made connection with an Eastern Air Lines plane which flew the needed serum to Abbeville.

It would be hard to choose from among our men just who did the most. "We regard all of them as unsung heroes," Director Clement said. "Our men as far as we know are the first to get into the area and many of them are still there now, helping to prevent looting and are working with the Civilian Defense people and the sheriff," he said.

Among the injured was Game Agent Daniel Roux, of Cameron. Arnold Rutherford, another game agent, lost his wife in the storm and Dupreville Bertrand, agent for the Fur and Refuge Division was killed.

According to Rutherford, he had been making preparations to evacuate his wife and child and to join the other agents when at 4:00 a.m. the water began to rise in his front yard. "Suddenly," he said, "the whole house started to float and then it disintegrated." He then climbed to the top of the floating roof with his wife and child and was holding on to them by their hands when a wave came along and swept over them. He succeeded in holding on to the child, but his wife slipped away and he did not see her again.

Meanwhile, in Cameron, the county seat of the parish, which bore the brunt of the storm and of which there is little left but the courthouse where 1000 persons escaped death, plans are being made to re-build a bigger and better city. "They will come back," says Sheriff O. B. Carter, "and we will build a new planned city."

With Frank Vaughn, an oil field worker, as with many others things aren't so certain. As he stood by for more than a week hoping at least to identify his own family among those brought in, he had this to say, "My old lady and my two grandchildren are out there. The water started coming in and in 30 minutes the house was floating. We floated for about four miles and the house broke up. I never saw them again. I drifted around for nine hours in a skiff I found and spent the night on the edge of a lake. The insurance company paid me for my car right away. Now I have a new car, no home, and no family. I don't know what to do."

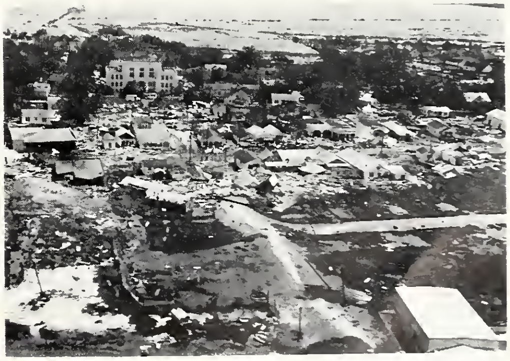
However, with another man, it was a different story. "I had 500 head of cattle, now I have two. We will re-build again and I'm not afraid of being so near the gulf. We had a storm like this about 50 years ago and I expect we won't have another like it for another 50 years. I would have stayed in spite of the warnings. A man can't leave everything he has behind, storm or no storm."

As in the aftermath of every disaster, there come recriminations and the U. S. Weather Bureau is bearing the brunt of those. Some believe that the bureau's warnings were not given in time. And, as usual, there are two opinions. The weather bureau is sticking to its guns and says that the record speaks for itself. On the other side, the citizens of Cameron are divided into three factions. The first are those who did get out ahead of time and have little to say; the second are those who say that practically every

(Continued on page 19)

WBRZ-TV Photo

Rescue crews from the Wild Life and Fisheries enforcement division found scenes such as these common as they moved into the wake of Hurricane Audrey after she struck Cameron parish.



WBRZ-TV Photo

Practically nothing was left in Cameron after hurricane Audrey struck. Upper left, is seen the courthouse where 1000 persons took refuge from the storm.

The Hunting Outlook

(Continued from page 5)

and weather conditions will be the most important factors contributing to the hunter's success.

Studies by biologists for the past number of years show a heavy over-population of deer in several sectors of the state, such as Madison, Tensas, and portions of Grant and Natchitoches parishes. Bucks killed in these areas are smaller, have less points, and harbor many more diseases and parasites than do those from less populated areas. As an example, buck deer killed in Concordia parish during 1956-57 season were found to be considerably heavier than those from neighboring Madison and Tensas parishes. The 18 month old bucks from this area averaged 3.4 points while those from Madison of the same age group averaged 2.8. Two and a half year old bucks from Concordia averaged 5.9 points, while those from Madison, 4.2.

Average weights of deer killed in the bottomlands of the state where over-population is not a problem is approximately one-third more than the weights of deer killed in hill parishes of the state.

Many hunters of the state are becoming aware that good deer management does not necessarily mean the perpetual protection of does and fawns, but rather their protection until the herd reaches its optimum number in relation to available food and thereafter regulation of the total population by having "any deer" seasons.

RABBIT

Jack A. Sims, Project Leader

The rabbit hunters in most parts of the state can expect about the same success as was had last year. The population trend, as determined by random road counts for the last quarter, show a slight increase over the same period last year. Since the breeding season is still under way at the time of the writing of this article, no definite statements can be made as to the fall hunting populations.

It is felt that the marsh rabbit population in southwest Louisiana was greatly lowered due to Hurricane Audrey. Most all of the ridges below the intracoastal canal were under water. This water came at a time when many young rabbits were in the nest. We were fortunate, however, that this condition was restricted to only Cameron and Vermilion parishes.

It might be interesting to point out that the sport of rabbit hunting with beagle hounds has not spread to North Louisiana to the extent that it exists in the southern parts of the state. Farmers in North Louisiana would probably welcome rabbit hunters to help harvest some of the surplus of rabbits in that area.

If you, as a rabbit hunter, are called upon to help keep records for the rabbit study in Louisiana, let me please urge you to cooperate to the fullest extent. Remember, this study is being conducted in an effort to help increase rabbit populations for you to hunt.

SQUIRREL

J. B. Kidd, Project Leader

With the exception of the southeastern section of the state, squirrel hunting this year will be as good as last year and possibly better in the south central and northwestern sections of the state. The average kill per hunting effort last year was 1.6 squirrels.

Mast conditions were poorest in the southeastern section of the state and it can be expected that the squirrel population will likewise be poor in this area.

The following is a breakdown of the mast conditions for the past fall which influences our present squirrel population:

- South East — Hunting should decline.
  - White Oaks — Below average
  - Hickory — Normal
  - Hackberry — Very low
  - Beech — Spotty
  - Red Oaks — Very low
- South Central — Hunting should be slightly better.
  - White Oaks — Good
  - Red Oaks — Below average

Camping scenes such as the one above will be duplicated many times during the 1957-58 deer season.

Louisiana squirrel hunters will take to the woods on October 18 for a 90-day season in quest of the bushytail.

Central — Hunting should be the same as last year.

White Oaks — Good
Hickory — Good
Beech — Spotty
Red Oaks — Fair

North East — Hunting should be the same as last year.

White Oaks — Good
Hickory — Fair
Beech — Poor
Red Oaks — Very Poor

North West — Hunting should be slightly better than last year.

Red Oaks — Failure
White Oaks — Excellent
Hickory — Good
Beech — Spotty

DOVES

John D. Newsom, Project Leader

There has been no significant change in the nationwide more liberal than during the past four years. Louisiana dove population picture since 1954. Therefore it is expected that there will be little change in the number of doves available to the gunner during the coming season.

The regulatory framework which has been established by the Bureau of Sport Fisheries and Wildlife is somewhat hunters will be allowed to take ten doves daily this season. The length of season has been extended to either 45 full days or 60 half days. The Louisiana Wild Life and Fisheries commission chose the 60 half days in order to allow a greater spread in the length of season, which will allow more dove hunters to take advantage of the sport.

Dove hunter success in North and West Louisiana will depend on early hunting dates in those areas; early September hunting is absolutely essential in order to obtain the maximum hunter benefits of the species.

A split season with the first part opening in early September and the last part in late November, December and early January, will offer the best possible hunting dates on a statewide basis under existing regulations.

All things considered, the coming dove season should be better than last year.

The Hunting Season

[illegible]

White and Grant Parishes will be open for a five (5) day period or until 100 buck deer are killed, whichever occurs first — beginning on Dec. 1. Still Hunting Only.

*Red Dirt National Wildlife Management Preserve in Natchitoches Parish will be open for a five (5) day period or until 100 buck are killed, whichever occurs first — beginning on Dec. 1. Still Hunting Only.

Deer hunting on the Catahoula and Red Dirt wildlife management preserves will be by permit only. Permits may be secured by any licensed hunter at preserve check stations during the hunting season on the preserves.

*The Evangeline Wildlife Management Area in Rapides Parish will be open for a seven (7) day period beginning on Dec. 1 for Still and Stand Hunting Only.

*Deer hunting on these areas is available through cooperation of the Louisiana Wild Life and Fisheries Commission and the United States Forest Service.

TO MAKE HUSH PUPPIES

Into a bowl, sift 1 cup white cornmeal (water-ground if possible), 2 tsp. baking powder and 1½ tsp. salt. Stir in ½ cup minced onion, 1 egg and ¾ cup buttermilk. If mixture doesn't hold together, add a little water. In a skillet heat ½ inch of fat or salad oil. Shape mixture into ½-inch-thick patties, oyster-size. Fry them till they're golden on both sides. Makes about 28 patties.

Shown above is E. R. McDonald, left, chairman of the Louisiana Wild Life and Fisheries commission, and Bill Barfield of Newellton, with a 211 pound, 7½ foot alligator gar that Barfield caught in Lake Bruin near Newellton. Mr. Barfield, a commercial fisherman, was fishing the lake under the supervision of the commission and the Tensas Parish Police Jury.

Mr. Wildlife

(Continued from page 6)

the flame colored daisies of Africa, the soap tree of India, one may even see a plant from the garden of the Mikado of Japan, for McIlhenny's fame and acquaintance was worldwide.

He created a huge duck pond in a remote section of the estate where all migratory birds were safe from harm. Another duck pond was built for the shooting season.

In the 1800's when the egrets from the snowy heron were the heighth in women's fashions, the bird was being slaughtered to extinction to make ornaments for fashionable women's hats. McIlhenny sagely observed that from among the herons and the ibis and the many birds that still came to his marshes from their equatorial homes the beautiful snowy heron had all but disappeared.

Over a pond he built a great cage of saplings and wire mesh and found eight fledgling egrets and caged them there and raised them. When grown he let them fly away and the next season they returned with others. It was the same each year and as the egret colony grew he built a city of saplings over the water for them to nest. Now this colony of more than 100,000 birds is wondrous to see and a living monument to the man who built it.

Contrasting with the dreamland of Jungle Gardens, as it is called, deep below the earth men are blasting thousands of tons of salt in the mines he operated and nearby is the tabasco plant which attests to the versatility of this man who was a scientist, humanist, observer, business man, writer, pioneer photographer and builder of a wildlife refuge which has been a pattern for governmental enterprises.

Thoreau will be remembered for his Walden pond but the baleful boom of the bittern, the rustle of the egret and the sonorous sounds of nature deep in the heart of Jungle Gardens will forever remind the traveler of the man who loved them and left them there for us.

Found in the new exhibit are the Louisiana, Green and Blue Herons, and the snowy and common Egrets. Also the Least Bittern, Purple and Common Gallinule, Boat-tailed Grackle, Prothonotary warbler and the Water Turkey.

The Boat-tailed Grackle, with his head pointing upward with wings spread, portrays the bird's method of courting its mate.

P. Ambrose Daigre, curator of the LSU Museum of Natural History is seen with part of the McIlhenny Memorial exhibit he constructed to resemble a scene from the famous Avery Island "Bird City."

One of the late McIlhenny's greatest contributions to ornithology, left, was his laborious and long-continuing bird-banding operation culminating in the banding during his lifetime of the phenomenal number of 189,298 birds.

McIlhenny had made several contributions to the research department of the museum before the establishment of the exhibit halls in 1952. He once presented the university with a collection of bird eggs he collected during one of his expeditions.

Another exhibit which is under construction is a sea bird nesting colony which is being financed by the Louisiana Ornithological Society and a Whooping Crane exhibit, supported by the Pan American Petroleum Corporation, with the assistance of the Wild Life and Fisheries commission, is also under construction.

The McIlhenny exhibit was financed by a donation from his daughters, Mrs. Lelia McIlhenny Brown of Destrehan; Mrs. Rosemary Osborne of Houston; and Mrs. Pauline Simmons of Avery island.

Other new exhibits to be added in the future are a desert scene from Arizona and a hardwood bottom land swamp scene featuring the white tailed deer, black bear and the ivory billed woodpecker. A penguin from "operation deep freeze" in Little America, which is now on display in Washington, D. C., is expected to be on exhibit at the museum in the near future.

During the past month, museum officials reported, more than 1,000 school children were visitors to the Museum of Natural science.

The best known goose is the gray lag-goose, the bird from which our domesticated form has sprung; while the mallard is considered to be the most popular of the ducks.

Barn owls are valuable rat catchers and are seldom seen because they carry on their activities at night.

Audrey Disaster

(Continued from page 15)

home owner in Cameron owns one or two cars and would have been able to get out had they been warned in time; and, the third faction says that they wouldn't have evacuated anyway. However, one thing is certain, at 4:00 a.m., Thursday, June 27, 1957, water began to rise in Cameron, between 7:00 and 8:00 a.m. the storm hit and by 5:00 p.m., Thursday, the waters went down and there was no Cameron.

Arguments will no doubt go on for years to come but to those descendants of the hardy people who were driven from their homelands in Nova Scotia two centuries ago and who settled on the marshlands of Cameron to stay, come storm or high water, there is but one opinion, "Ce' est l' bon Dieu, il les donne, il les prend".

At the present time, no estimate has been made by the Wild Life and Fisheries commission as to the damage caused to its properties by the roaring waters of the Gulf, however, it is known that the installations at Pecan island, with the exception of part of the boat house are gone. Levees around the island and the Rockefeller refuge have been torn through and the Fur and Game division's properties have been severely damaged. The enforcement division has reported two large craft damaged and one medium boat a complete loss. It will be quite a while before full dollars and cents estimate of the damage may be reached, the commission says.

To date the known dead from the storm have reached well over 500, many of whom were unidentified and have been buried in mass graves. Almost 200 persons are unaccounted for and latest estimates by parish officials say that the total loss of life may reach 600 persons.

Meanwhile, Civil Defense workers, the American Red Cross, and the Salvation Army have been at work ministering to the sick and needy. On the marsh an estimated 65,000 head of cattle lay dead along with the remains of deer, muskrats and alligators. Parish officials are working round the clock attempting to burn off the carcasses before pestilence sets in. Total civilian damage has reached an estimate of $100,000,000.

Those agents of the enforcement division of the Wild Life and Fisheries commission who have been commended by State and Federal agencies and Director Clement for their work during the emergency, are:

Chief Rudolph P. Easterly, Asst. Chief Julius L. Book, Capt. Anthony Berni, Game Agent B. C. Dahlen and Game Agent Frank Trocchiano of New Orleans; Capt. Dewey L. Farrar, of Shreveport; Capt. Lesma Hebert of Labadieville; Capt. Thomas D. Rayburn, of Bogalusa; Capt. Clarence Hood, of Jonesboro; Capt. Charles Ventrella, of Bachelor; Capt. Leonard C. New, of Kentwood; Capt. Joseph L. Billiot, of New Orleans; Capt. Joseph J. Waguespack, of the boat "Pintail" of New Orleans; Capt. George A. Chiasson, of the boat Safety Craft, of Abbeville; Game Agents Wm. G. Barnette, of Vivian; Jack Stanfield, of Minden; Earnest O. McCoy, of Ringgold; Alfred Couvillion, of Simmesport; Regile Doucet, of Washington; Hyrum Lee Martin, of Washington; Coleman Fontenot, of Eunice; Andrew L. Jackson, of Melville; Honore Tate, of Lawtell; W. Bonaventure, of Oscar; Vincent Purpera, of Innis; E. J. Cormier, of Lafayette; Noisey P. Begnaud, of Carencro; Ivy J. Hanks, of Morse; Lester J. Hebert, of Crowley; Melvin Dupuis of Breauz Bridge; Robert Romero, of St. Martinville; George T. Bunch, of Clinton; Ben A. Price, of Ethel; Nick Niehaus, of Ponchatoula; Huey S. Bardwell, of Ponchatoula; Jesse Sanders, of Kentwood; Leroy Seal, of Varnado; Thomas Kemp, of Bogalusa; Bradley W. Herrin, of Pearl River; A. D. Parker, of Covington; Arthur Jenkins, of Covington; Charles R. Harris, of Denham Springs; L . U. Jarreau, of Baton Rouge; Harold Schexnayder, of Sorrento; Lloyd C. Andrus, of Lake Charles; James F. Ellis, of Sulphur; Bernett Jardell, of Sulphur; Daniel Roux, of Cameron, INJURED; Arnold Rutherford, of Cameron, INJURED & LOST WIFE; Milton Lege, of Abbeville; Theodore Bonin, of Avery Island; Melvin Duhon, of New Iberia; Everette Fouquier, of Franklin; Cecil Gilmore, of Berwick; Cullen Landry, of Paincourtville; James V. Jaccuzzo, of Houma; James Waguespack, of Houma; Lloyd Songe, of LaRose; Dupreville Bertrand, of Grand Chenier, DEAD; Aviators Nat Pedro, John McGovern, Preston "Buck" Davis, and Tom Clements; John Ellington, Chief Pilot.

Commission Participates In Waterfowl Banding

AGAIN THIS YEAR, the Louisiana Wild Life and Fisheries commission is participating in the duck and goose banding project conducted each year in Canada by the U. S. Fish and Wildlife Service and the Canadian Wildlife Service. Representing Louisiana this year will be Morton Smith, game biologist for the commission. Smith will work with the representatives of other states and the service for a period of approximately six weeks, depending on the nesting progress.

The waterfowl banding project is carried on principally in the prairie provinces of Canada but some efforts are made in other areas such as our northernmost states, Alaska, and the Hudson Bay area where many of the blue geese may be found nesting.

The efforts of the cooperative banding crews are directed for the most part to nestling ducks as this method or system has proven to be more practical in determining "points of origin" of the ducks. These points of origin, once located, are of much value to the game technicians. They pinpoint the various segments of the waterfowl and aid materially in determining the extent of production which enables the technicians to tie-in the annual harvest to the production.

Director Lamar Clement and Biologist Morton Smith.

Shrimp Potpourri

(Continued from page 13)

whose lengths normally range from about seven to nine inches or more. The females average somewhat larger than the males, say about nine to the pound as against ten to the pound for the large males. Occasionally the females approach a length of ten inches and may weigh up to three ounces or more. The adult white shrimp forage on the sea bottom, somewhat like cattle on a ranch, but seldom go out to bottoms covered by more than 100 feet of water.

The Brown Shrimp (*Penaeus aztecus*)

Common Names: — for young: brown shrimp, brown grooved shrimp, brownies, green lake shrimp, night shrimp, Brazilian shrimp (misnomer); for adults: jumbo brownies, orange or golden shrimp, golden night shrimp, jumbo grooved shrimp.

Brown shrimp are becoming increasingly important in the fishery of the northern gulf, especially since the deep sea trawlers have extended their trawling grounds beyond the range of the white species and have learned to fish at night. What happens to the shrimp during daylight hours can only be surmised. From various bits of evidence, the writer believes they bury in the bottom, perhaps deeper and to a greater extent than do the white shrimp.

Brown shrimp do not seem to gather in schools as huge as the white species, and scattered populations are present on the nursery grounds and in the open sea at all seasons of the year. Their life history in a general way is similar to that of the whites, although they seem to spawn earlier and over a longer period. When conditions are otherwise favorable, this gives them a biological advantage over the white species.

The first brownies born early in any given year grow rapidly in the spring. Large movements back to the sea take place during June and July. Such migrating brownies are usually between 4½ and 5½ inches, as compared to 5½ to seven inches for the returning white shrimp. Relatively few brownies as large as six inches are taken in inside waters.

Growth of male brownies ceases at a much smaller size than for male white shrimp, and they do not attain true jumbo size. Female brownies, on the other hand, continue to grow until they are at least as large or even larger than the females of the white species. Large male brown shrimp average a little over six inches, and the maximum is around seven and a half, and the average weight is about 20 to the pound. Females, however, range from about seven to nine inches or more and average perhaps about ten to the pound. Much larger females have been reported, the maximum approaching 10 inches and weighing some four ounces or more. Adult brown shrimp range seaward in much deeper water than the white species, to at least 300 feet.

The Pink Shrimp (*Penaeus duorarum*)

Common Names: — for young: spotted shrimp, skippers (in the bait trade), hoppers (to commercial trawl fishermen); for adults: pink shrimp, pink grooved shrimp, pink night shrimp, spot shrimp, jumbo hoppers.

Pink shrimp are relatively rare along the Louisiana coast, although the number harvested has increased considerably in recent years, expecially since the advent of night trawling. The young of this shrimp prefers relatively clear shallow water, and its best nursery grounds are in quiet waters with firm bottoms upon which there is a protective growth of some kind. This may be vegetation such as turtle grass or algae, or animal growths such as sponges, bryozoons and corals. The Chandeleur chain of islands affords the only relatively large area of this kind in Louisiana that is not muddied periodically by flows from mud-laden rivers. Consequently it is our best pink shrimp nursery ground. During daylight hours, pink shrimp seem to hide near bottom in the shade of vegetation, sponges, etc., coming out only at night to feed.

The life history of the pink shrimp is perhaps similar to that of the preceding two species. The adults, although preferring a somewhat different type of bottom, range in depths intermediate between the outer extremes for the whites and browns respectively, or about 100 to 200 feet. Like the browns, the pinks seem to be present on suitable nursery grounds at all seasons of the year. In the Gulf, off the Chandeleur islands, although generally too scattered to support a separate fishery, fair numbers are taken incidental to fishing for other species, or as a by-product of the so-called "trash fishery" for catfood and other products. They constitute, therefore, an added dividend.

As with brown shrimp, male pink shrimp average smaller than the females. They are rarely over six inches and weigh around 24 to the pound, whereas females are usually 6½ to 8½ inches and may average 10 to 13 to the pound. Some few females will grow as large as the superjumbo browns and whites.

Pink shrimp are a little wider than the other jumbo species of the same lengths and are able to crawl on the deck of a boat like river shrimp and hop upward, hence are known as "skippers" or "hoppers".

The Seabob (*Xiphopeneus kroyeri*)

Common Names: — seabob: six beards, seven beards, all corruptions of the French "six barbe" and "sept barbe". Counting the elongated head spine, there are really eleven slender forward extensions, some more conspicuous than the others.

The seabob is a small shrimp, adults of which are seldom over four inches. It is still an important species in the dried shrimp industry and sometimes is sold on other markets when larger shrimp are scarce. In other states it may enter the highly saline waters of coastal bays, but in Louisiana, where the waters are muddied and freshened by large rivers, it is confined almost entirely to the open Gulf. Here, large schools sometimes swarm along the outer beaches.

The Egg-bearing Shrimp

The egg-bearing shrimp belong to a different family from the free-spawning sea shrimp mentioned above. As with the crawfish, the female deposits her eggs in an elongated pocket under her abdomen and they are held there until a few days after they hatch. The newly hatched young will even leave and return to the protection of the mother for a time.

Thus the females protect their eggs and young during what would otherwise be the most hazardous period in the life cycle, and a much smaller number of eggs is required to maintain such species than with the free-spawning sea shrimp.

In addition to the edible species, and this refers to size only, there are several smaller species of egg-bearing, so-called grass shrimp, which, in the aggregate, cover the entire salinity range from fresh to sea water. Some are sold for bait, especially in the fresh water areas.

The larger edible species are described below:

The River Shrimp (*Macrobrachium ohione*)

Common Names: river shrimp, common river shrimp, stump shrimp.

This is the species which has always been considered a great delicacy and a food for gourmets of Old New Orleans. Unfortunately it is so small that the larger sea shrimps are gradually pushing it off the markets. Table size adults average about 100 to the pound.

The river shrimp, alias stump shrimp, is a favorite in the bait industry as it lives long in captivity. The body is stout and cylindrical as compared to the marine shrimp, and captured specimens will crawl like crawfish rather than lie on the side.

The river shrimp inhabits the larger rivers of Louisiana from the Pearl to the Sabine, but is commercialized largely from the Mississippi and the Atchafalaya. It also inhabits fresh water lakes in the flood plains down to the very edge of salt water. It is taken largely by means of baited traps, using either meal or animal matter for bait. Another method, especially applicable in the lakes, is to suspend willow or wax myrtle branches in the water. A net is slipped under the branches as they are periodically lifted to the surface.

The Delta Shrimp (*Macrobrachium acanthurus*)

Common Names: Delta shrimp, giant river shrimp, long-clawed shrimp.

This is another newcomer in the commercial field. For the past decade it has been found in increasing numbers each succeeding year. It has not only established itself in the delta of the Mississippi river, but also in some of the slightly brackish water of coastal lakes and bayous. Although it seems to be replacing the common river shrimp in the Delta in the vicinity of the passes, which permit periodic influx of salt water, it has not ascended the Mississippi above the passes.

Like the common river shrimp, the newcomer is taken best by means of baited traps, but a larger entrance cone is necessary than for the smaller species. The long unwieldy claws of the adult males places this species in a class by itself among Louisiana shrimp. Select male specimens average 16 to the pound, females about 30, but what is more important, these delta delicacies are a tempting dish.

How To Distinguish The Edible Shrimp

The length is the total length measured from the tip of the spine, or blades, whichever is the longer, to the tip of the tail fan.

The *head* is the first large segment containing the head and thorax parts (Latin designation, *cephalothorax.*)....

The *tail* comprises the rear six fleshy segments of the body, or *abdomen.*

The *spine* is the pointed forward projection of the head (Latin, *rostrum*).

The *blades* are a pair of oar-like projections on the head below the eyes (Latin, *Scaphocerites*).

The *whiskers* commonly referred to as such are the main or second pair of whiskers, a pair of hair-like organs attached to the base of the blades (second antennae).

The *short whiskers* are really the first whiskers, a branched pair of hair-like organs attached above the blades (first antennae).

Group A. Free-spawning Marine Shrimps. Segments higher than wide. First three pairs of legs with pinchers. Females without egg-pocket. Migratory or wandering marine species, the young of which may enter brackish waters.

THE WHITE SHRIMP, *Penaeus setiferous.* Ridge on top of head not bordered by grooves. Three hind tail segments with keels. Keel on last segment not bordered by grooves. Spine slightly longer than blades in young, slightly shorter in adults. Main whiskers about twice the length of the shrimp. First whiskers short.

THE BROWN SHRIMP, *Penaeus aztecus.* Keel on top of head bordered by grooves which converge slightly towards the rear. Spine shorter than blades. Three hind segments with keels, the last bordered by grooves which are wide and deep enough to receive the edge of your fingernail (except in very small shrimp). Main whiskers close to 1½ times the length of the shrimp. First whiskers very short.

THE PINK SHRIMP, *Penaeus duorarum.* Keel on top of head bordered by grooves which widen slightly near the rear ends. Spine shorter than the blade. Two hind segments with keels, the last bordered by shallow grooves, not wide enough to receive the edge of your fingernail. The third to last segment with a rounded ridge, not a true keel. The main whiskers not quite 1¼ times the length of the shrimp. First whiskers extremely short, mere rudiments. A blackish or reddish spot, usually very conspicious, adorns the tail at the junction of the third and fourth segments.

THE SEABOB, *Xiphopeneus kroyeri.* Ridge on top of head segment not bordered by grooves. Spine very long, distance from eyes to tip about twice as long as distance from eyes to tip of blades, strongly curved upward in front of eyes. Main whiskers about three times the length of the shrimp. First whiskers also very long. The last two pairs of legs also extend forward as whisker-like filaments. The common names are derived from these structures which give the creature a bearded appearance. A small shrimp seldom reaching four inches in length.

Group. B. The Egg-bearing Shrimp. Segments more or less cylindrical. First two pairs of legs with pincers. Females with egg-pocket. Non-migratory, fresh or slightly brackish water species.

THE RIVER SHRIMP, *Macrobrachium obione.* Spine of moderate length, not exceding the blades, somewhat leaf-like and serrated except for the upturned tip which resembles a stylus, about 11 serrations on the upper edge and around three of the lower. Second pair of legs long and slender, but less than the length of the shrimp. Main whiskers less than 1½ times, first whiskers about equal to the length of the shrimp. A small species seldom over three inches long.

THE GIANT DELTA SHRIMP, *Macrobrachium acanthurus.* Spine long, exceeding the length of the blades, lance-like and usually curved upward; about 9 serrations along the upper edge and about 6 along the lower, serrations extending almost to the tip. In mature males, the second legs are longer than the shrimp, in females and young, less than the length of the shrimp. Main whiskers over 1½ times, first whiskers about as long as the shrimp. A fairly large species, males of which may reach six inches, females 4½.

DO GOODER'S BACKFIRE

Roy Johnson of Spokane, Washington, lost his pet skunk and advertised for it. A motorist found one with its head stuck in a jar. After having a veterinarian remove the jar, he sought out Johnson—who wasn't at home. The motorist parked it with a neighbor. Next day Johnson dropped in to pick up his skunk. But it wasn't his—and it wasn't a pet. In fact, it had sprayed the irate neighbor's kitchen to a fare-thee-well.

This weird looking speckled trout with the head of a dolphin was caught by Bill Bailey of New Orleans in Lake Borgne on live shrimp. Weighing 2½ pounds, the fish has all of the physical characteristics of a trout except in the upper portions of the head, where it resembles a dolphin.

LOUISIANA WILDLIFE FEDERATION

BATON ROUGE SPORTSMEN BAG 440 CROWS

The annual Baton Rouge Sportsmen's League Crow Shoot which lasted for 30 days is now in the record books. A total of 440 crows were bagged by the hunters who took to the woods and swamps in an effort to prove their hunting skill. Crows are mighty sharp birds and it took a keen eye to drop the black marauders, expecially with the clouds of mosquitoes and ticks bothering the hunters. First place was won by Hurley Campbell who bagged 116 crows. Russ Hudson was second with 94 birds and Valery Cooper placed third with 56. Although the contest is over, many of the Club members will keep at it. They say — it's top sport.

SKIERS REQUESTED TO SHOW COURTESY

The Washington Parish Conservation League is appealing to water skiers in the parish area to observe normal rules of water courtesy, according to public relations chairman Murphy Williams, Jr.

"Speeding boats pulling skiers are creating hazards for small boat fishermen in the area," Williams said, "putting them in danger of swamping from speedboat waves. The average powerboat pilot slows his craft when approaching a small craft to avoid swamping it, but water ski pilots have not been slowing down, speeding by to keep up the necessary speed to hold the skier above the water."

SLIDELL STAGES TRAP SHOOT

The recently organized Slidell Sportsmen's Club held its first trap shoot on the Sollberger Farm. A large gallery of spectators watched the members hit and miss the clay pigeons. Frost Fleming, the club secretary was top gun and was awarded a 20 pound turkey. Lawrence Barkley, Sr. who serves the club as Prexy won a brace of pheasants for his second place score. Third place was won by C. Bruno. The participants expressed enthusiasm for the match and look forward to the next shoot. Many of the ladies who tried their hands at the shoot after the men hung up the guns stated that at the next shoot they would enter the event and compete against the men. The club welcomes all St. Tammany Parish residents as members. Other officers of the club are John Sollberger, Veep and William Lowery, treasurer.

FLYWAY COUNCIL APPROVES TEAL SEASON, WOOD DUCK BAG, TWELVE DOVES

The Mississippi Flyway Council approved practically all of the requests of the Louisiana Wildlife Federation at the meeting held in St. Louis, Missouri in mid-June. Among the requests favorably passed by this group were: recommendation that Louisiana be granted an experimental special hunting season on Blue Wing Teal, legalize the taking of one wood duck per day, and the raising of the bag limit on the mourning dove from eight birds to twelve. Recommendations of the Flyway Councils are referred to the U. S. Fish and Wildlife Service and are seriously considered by that agency when preparing regulations for the hunting of migratory birds.

Represented at the Flyway Council meeting were several sportsmen from the New Orleans area including W. B. Fox, Joseph Montgomery, Judge Wayne Borah and Major James Brown. All are members of the AVOCA Duck Club as well as the New Orleans Sportsmen's League.

SLIDING SCALE FOR DUCKS UNFAIR

Approval of a sliding scale for setting seasons and bag limits on ducks based on a bag of four per day with a 70 day season was termed "unfair" to hunters by the president of the Louisiana Wildlife Federation.

Lloyd F. Abadie, federation president stated that the proposal to grant an increase in bag limit, only upon an increase of 20% or more in the duck population was "unrealistic and approaches a breach of faith with the sportsmen of the flyway who were told that the limit of four ducks was a temporary measure".

According to the U. S. Fish and Wildlife Service's own figures the increase in duck numbers has been phenomenal. Either we have been discriminated against or the federal Service has attempted to stock-pile ducks, Abadie continued. "Federation members are being alerted to stand by for action to oppose any attempts to put this unsound plan into action" Abadie concluded.

NATCHITOCHES PARISH RODEO WINNERS

Carlo Digilormo won the bass division with a five pound, one ounce lunker and received a 12 foot aluminum boat, the top prize in the rodeo. Ira Green caught a one pound, four ounce bream in Saline Bay and won the top prize in that division which was a 3 h.p. outboard motor. The white perch division was won by John Atwood and the 1 pound 15 ounce beauty won for Atwood a 3 h.p. motor. This perch was caught in Cane River Lake. Seven of the bass winners came from Cane River which proved that there is many a good size one available to the fishermen. Most of the bream winners came from the Prairie.

In the women's division, Mrs. Mary Gresham and Mrs. Estelle Glover won first and second place in the bass section. Mrs. Gresham's bass weighed in at two pounds. Mrs.

Photo by Guillet

Carlo Digilormo sits in his prize boat and demonstrates the size of his 5 lb. 1 oz. bass that took first place in the Natchitoches Parish Fishing Rodeo. He caught it in Cane River on a red plastic worm. With Carlo is John Atwood and the outboard motor which he won with his 1 lb. 15 oz. white perch, and Ira Green with his outboard motor, the result of his 1 lb. 4 oz. bream entry.

Mavis Grafton's 15 ounce bream and an eight ouncer caught by Mrs. Glover won prizes in that division.

Charles Rollo and John Solice claimed the prizes in the children's bass division. Both winners came from Cane River. Rollo's fish weighed 2 pounds and Solice's tipped the scales at 1 pound 11 ounces.

Commercial fishermen winning prizes were Douglas Grappe and Grady Dowden, catfish division; W. N. Philips and Mavis Grafton, gaspergou division; and Douglas Grappe, buffalo division. Latief Ackel won the garfish division.

"Grits" Gresham, president of the Natchitoches Parish Association stated that 440 wildlifers were now on the rolls and that the membership drive was still on. Several other interesting contests will be held in the near future and all you have to do to be eligible to participate in these events is join the Association, Gresham said.

RAPIDES PARISH WILDLIFE ASSOCIATION ACTIVITIES

The members of the Rapides Parish Wildlife Association held their annual barbecue in June at Harold Miles Park. The association officers reported a better portion of its 1956-57 projects either completed or nearing completion. They promised to continue their fight against stream pollution as well as an all-out drive against noxious weeds and moss that is threatening to choke out many area fishing spots.

Membership in the association now stands at 1,200 and Lynn Longino, president of the group predicted that the 2,000 membership goal would be reached before the end of the year. The Larto Lake dam is currently under construction with the funds for the project approved. Prospects for the Cocodrie dam are most encouraging, Longino reported, with an early start on the project expected as soon as the rights-of-way problem is solved.

The wildlife group will sponsor the annual Gar Fish Rodeo during the Alexandria Susquicentennial celebration.

Serving with Longino this year are: Marshal Gentry, vice president; Roy Lemmons, secretary; and T. E. Banks, Sr., Treasurer. The untiring efforts of these leaders have done much to benefit the association and the community. The association members are most appreciative of the efforts and achievements of Senator C. H. Downs, Representatives Ben F. Holt, Bob Munson, and Lloyd Teekell, members of the Louisiana Legislature who have done and are doing much to benefit fish and game and the sportsmen of the state.

BATON ROUGE SPORTSMEN LEAGUE ANNUAL FISHING RODEO

The annual fishing rodeo of the Baton Rouge League is scheduled to be held from noon on Friday, September 6 until 6:00 P.M. Sunday, September 8th on Old River in Pointe Coupee Parish. The only entrance requirement is that the person be a member in good standing of the League. The site of this popular fishing rodeo was selected by the Board of Directors and approved by the membership and represents a major departure from past years as previously it had been customary to stage the event on the "Big Horseshoe" which is False River, Pointe Coupee Parish. Persons who fish Old River regularly are most enthusiastic about the site of the rodeo and contend the time selected is the best for that body of water.

The prize list is far from complete with merchants contributing many fine prizes daily; preliminary plans are to have at least 15 places in the bass division, 10 places in the bream division, and 10 awards in the crappie division. First place winner in the bass division will win a handsome trophy, a 5½ h.p. outboard motor, a 14 ft. aluminum hull, and have the prize winning fish mounted courtesy of the League. Lesser prizes will be awarded the other winners and it is estimated that the total value of the prizes awarded in this year's rodeo will exceed $1,500.00. In addition to the classes of competition already mentioned prizes will be awarded for the largest rough fish, catfish, and "goo". The entrance prize for the event will be a 14 ft. aluminum hull which will be drawn for by the members who take time out to record their membership card number at the weighing station at Ollie Dickenson's camp, during the rodeo hours.

POINTE COUPEE FISHING RODEO WINNERS

The annual Pointe Coupee Parish Sportsmen's League fishing rodeo winners were recently announced by League prexy Jules Fontenot. All of the waters of the parish were open to the members for rodeo competition. Here are the complete results of the event:

BASS

1. Sidney Newsom (5 pounds, 12 ounces) Old River.
2. R. E. Clark (4 pounds, 8 ounces) Pits.
3. Jim Roshto (4 pounds, 4 ounces) Old River.

BREAM

1. Joe Amadee (13 ounces) Old River.
2. Mrs. P. Burgeois (12½ ounces) Old River.
3. H. L. Parsons (12 ounces) Old River.

SAC-A-LAIT

1. Joe Amadee (1 pound, 9 ounces) Pits.
2. Purvis Wells (1 pound, 8 ounces) Spillway.
3. Joe Ortiz, Jr., (1 pound, 7 ounces) Lake.

GARFISH

1. Vernon Gustin (four pounds, five ounces) Spillway.

GASPERGOO

1. Jack Colvin (four pounds, six ounces) Old River.

TURTLE SOUP

Cleaning turtles is not as hard as it might seem — no worse, for instance, than cleaning a chicken. Cut off the head, then cut skin from around shell, neck, legs and tail; sever the bridge between the two shells at the cartilaginous joint. Insert the knife under the plastron and cut it free, exposing the meat. Or, you may prefer to scald it like a hen, after which the shell can be stripped off.

Ingredients: 2 pounds turtle meat, 2 lemons peeled and diced, 2 hardboiled eggs, 2 onions, 4 pieces of celery, a dash of cayenne pepper, a few pepper corns, cloves, 2 bay leaves, 1 cup sherry, 1 cup brown flour, 2 tablespoons tomato paste or puree, salt.

Cook turtle meat in water with vegetables, salt and spices until tender, strain soup stock and dice meat. Braise onions, celery and lemon rind in butter, add flour and cayenne, stir until smooth, add stock, boil 20 minutes, strain. Add the turtle meat, tomato, diced lemon, diced eggs and again bring to boil. Add sherry and serve.

CONSERVATION IS STRENGTH

The conservation of soil is important to the welfare of all of the people. Unstable is the future of any country that allows its resources to be wasted. If there is one lesson in history that is unmistakable, it is that national strength is dependent upon the wise use and conservation of the resources. Therefore, we must continually teach children, young, and adults on all levels the wise use and conservation of the resources of the State and Nation.

SHELBY M. JACKSON,
STATE SUPERINTENDENT OF EDUCATION
BATON ROUGE, LOUISIANA

The earliest record of a banded bird is that of a heron captured in Germany in 1710. The metal bands on its leg had been placed there in Turkey several years before.

MORGAN CITY PREPARES FOR "BLESSING OF THE SHRIMP FLEET" ON LABOR DAY

PRESTON FOSTER, "Captain John" of TV's Waterfront program, star of motion pictures and radio as well, his wife and daughter will be featured attractions at the 1957 Shrimp Festival and Blessing of the Fleet at Morgan City during Labor Day weekend.

This trio of entertainers will be presented at the Shrimp Festival Coronation Ball Saturday night, Aug. 31, and will participate in the Water and Street Parades the following day.

Preparations are underway to make the 1957 Festival the greatest in 21 years of staging such celebrations at Morgan City. Three days of program events will offer visitors a wide range of interest and entertainment.

Highlight of the annual show is a serious, dramatic open air church service — the famed Blessing of the Fleet. Shrimp trawlers and workboats of every description serving the inland marine and offshore oil industry will congregate in Berwick Bay, of the Atchafalaya River, Sunday, Sept. 1, to receive the benediction of the local Catholic priest, Father Henry Holleman. He and his accolytes are transported aboard the flagship while all other vessels remain at anchor for the traditional service.

Following the religious rites at ten o'clock on Sunday morning the brightly decorated craft ranging from speedboats to huge sea-going tugs and self-propelled barges move out into the Bay to parade with hundreds of passengers aboard and before thousands on shore. It is a spectacular filled with action, color and significance representing as it does the seafoods and oil producing industries which play such vital roles in Louisiana's and Morgan City's prosperity.

The champion shrimp producer of the past year will be crowned King at ceremonies opening night of the three day Festival. Daughters of shrimp captains will be honored with roles in the court show and one of them will reign as Queen. Many shrimp producers and their wives will be guests of honor as will visiting queens from throughout Louisiana.

A street procession of custom built floats, beauties, bands and parade horses is one of the attractions Sunday afternoon. The Annual Shrimp Festival Golf Tournament and Swimming Meet are other big events.

The Turtle

(Continued from page 3)

leveled at the box turtle suspected of being an important factor in the destruction of quail and turkey nests. This suspicion has as its basis an observation of these turtles eating broken egg shells from the nests. No one had, however, observed the turtles breaking the eggs. It was suggested that the turtle smashed them with its plastron, punched them against a stone, or used its head as a hammer. One biologist, curious as to the ability of the turtle to break the eggs, offered eggs to a number of captives. He found that the turtle broke eggs only by crushing them in its jaws; that it could not injure eggs larger than its jaw spread and thus could not break turkey eggs. The turtle ate the shell, not the contents. The latter fact explained the observation of turtles in nests which had been destroyed by other animals.

Laboratory studies demonstrated that the box turtle could not destroy eggs larger than those of the Bob-white quail and Hungarian partridge and thus these are the only upland game birds likely to suffer from egg damage by the box turtle. Egg shell is a minor item of the turtle's diet.

The difficulty of defeating long accepted dogma about turtles with accurate information is well illustrated by the statements of Cheatum, Fontaine and Longnecker, 1943, "These animals are regarded as detrimental to the fish populations. They probably do considerable damage to the spawning grounds, and stomach analysis show that some consume fish along with other animals and plants." These authors emphasize that the turtles must also be looked upon as competitors for fish food.

The interpretation of the good accomplished by turtles feeding on aquatic vegetation is indeed subject to varied viewpoints. One researcher thus believes that the painted turtle does no harm in feeding on aquatic plants whereas others believe that the turtles destroy plants of importance as food to fish and game birds. It has been questioned that sufficient quantity of plants were eaten in any area to be of significance. Yet when one recognizes the potential population concentrations of aquatic turtles and the large quantity of material consumed daily by each individual, their role of plant destroyers, whether of positive or negative value, appears to be of importance.

The very presence of large quantities of plants in the diet of many turtles suggests that they may be of especial value in the control of aquatic vegetation which has destroyed many thousands of acres of productive waters in Louisiana.

The cumbersome and slow-moving land turtles can not actively pursue and capture quick-moving animals. They have been forced to depend upon plant material with an occasional supplement of animal food. That this diet is in no way a handicap is clearly demonstrated by the success of these terrestrial species.

The box turtles have been observed to capture insects by a rapid lunge. I once observed a common box turtle clamber clumsily but rapidly along the ground in pursuit of a woods cockroach that managed to stay just in front of the outstretched head. The persistence of the turtle yielded no results, the roach entering a crevice in the log and the turtle abandoning his chase.

The great longevity of turtles and their continued success in competition with more specialized animals is partially due to their ability to endure long periods without food. Hatchlings may survive more than one year on the mass of yolk retracted into the body at hatching. This food reserve permits the young turtle to survive through its first winter and spring, the period in which it is most susceptible to predation and must surmount hazards not encountered later in life. Young turtles, frequently unable to escape from the nests until the ground is softened by spring rains, must survive on this store of energy.

Adult turtles may survive many weeks without food. This ability permits them to live under conditions in which other animal life can not. Snappers have been known to remain buried in the bed of a dried lake for several months to be plowed up by farmers cultivating the old lake bed. A group of students from the University of Southern Illinois excavated buried snappers from an Illinois lake bed in the summer of 1939. Although the thick clay was baked and cracked by the sun above their burial places, the turtles were healthy and decidedly aggressive when removed.

The turtle on the hook or the turtle enjoying bites from a string of fish is an irritant to the fisherman. But does this mean that turtles are harmful to fish populations? The answer is obviously no.

Some of the major problems in our Louisiana fishing waters are: (1) we have too many small fish and not enough large ones; (2) we have too many rough fish occupying space for game fish; (3) our aquatic vegetation destroys fishing waters. Perhaps our turtles are useful in removing the diseased and slow-moving fish. Perhaps they are of value in that they destroy aquatic vegetation. It is doubtful if they are important competitors for food of game or commercial fish.

Certainly we do not know enough about the effect of our turtle populations on fish populations. But it is apparent that the limited evidence suggests we should not destroy turtles until the facts are known.

The 10 Commandments of Safety

1 **Treat every gun with the respect due a loaded gun.** This is the first rule of safety.

2 **Guns carried into camp or home, or or when otherwise not in use, must always be unloaded,** and taken down or have actions open; guns always should be carried in cases to the shooting areas.

3 **Always be sure barrel and action are clear of obstructions,** and that you have only ammunition of the proper size for the gun you are carrying. Remove oil and grease from chamber before firing.

4 **Always carry your gun so that you can control the direction of the muzzle, even if you stumble;** keep the safety on until you are ready to shoot.

5 **Be sure of your target before you pull the trigger;** know the identifying features of the game you intend to hunt.

6 **Never point a gun at anything you do not want to shoot;** avoid all horseplay while handling a gun.

7 **Unattended guns should be unloaded;** guns and ammunition should be stored separately beyond the reach of children and careless adults.

8 **Never climb a tree or fence or jump a ditch with a loaded gun;** never pull a gun toward you by the muzzle.

9 **Never shoot a bullet at a flat, hard surface or the surface of water;** when at target practice, be sure your backstop is adequate.

10 **Avoid alcoholic drinks** before or during shooting.

Reprinted from a leaflet supplied free in quantities to anyone interested in advancing the cause of hunting and shooting safety. Send requests to SPORTSMEN'S SERVICE BUREAU, 250 East 43rd Street, New York 17, N. Y.

Photo by Erol Barkemeyer

Beautiful Lake Providence in East Carroll Parish.